

### **REMARKS**

This Response amends Claims 27 and 28. No new matter is added and no new issues are raised by this Response. Now in the application are Claims 1-29, of which Claims 1, 7, 13, 20, 22, 27, 28, and 29 are independent. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance. Applicants respectfully urge the Examiner to reconsider the outstanding rejections and to pass the claims to allowance in view of the remarks set forth below.

Applicants note in the detailed portion of the Office Action the Examiner's rejections merely address Claims 1-23 and do not specifically address the patentability of Claims 24-29. Nonetheless, based on the Office Action Summary and the lack of any indication of allowable subject matter Applicants provide comments on Claims 24-29 as if these claims are rejected under the references cited in the rejection of Claims 1-23.

#### **Claim Amendments**

Claims 27 and 28 are amended to clarify the recited features to more fully appreciate Applicants invention. The amendments to Claims 27 and 28 are not meant to address any art rejection for no detailed reasoning concerning the rejection of Claims 27 and 28 is offered in the Office Action.

#### **Claim Rejections under 35 U.S.C. §103**

The Office Action rejects Claims 1-23 as being unpatentable over U.S. Patent No. 6,341,239 of Hyashi, et al. (hereinafter "Hyashi") in view of U.S. Patent No. 5,862,326 of Bapat (hereinafter "Bapat") and U.S. Patent No. 6,609,165 of Frazier (hereinafter "Frazier"). Applicants respectfully traverse each of these rejections on the basis of the following arguments that Hyashi in view of Bapat and Frazier fails to teach or suggest all elements of the now pending claims, as described below, and hence does not obviate the claimed invention.

For purposes of clarity in the discussion below, the respective related claim sets will be discussed separately.

#### Summary of Invention

The invention is directed to a rewriting device, system and method for rewriting data stored in a memory of a vehicle controller with new data. The rewriting device and system are capable of communicating with the vehicle controller. When a deleting or writing operation on the memory is not being performed, the rewriting device, system and method determine that communication between the rewriting device and the vehicle controller is offline if no response is received from the vehicle controller within a first determination time or reference time. When a deleting or writing operation on the memory is being performed, the determination of offline is prohibited until a second determination time elapses. The second determination time is *greater* than the first determination time or the reference time.

An advantage of the rewriting device, system and method for rewriting data stored in a memory of a vehicle controller with new data is the fact that the second determination time is *greater* than the first determination time or reference time. Accordingly, an erroneous determination of offline due to a busy state of the CPU in the vehicle controller is avoided when the rewriting device, system or method is carrying out either a deleting or a writing operation.

#### Summary of the Hyashi Patent

The Hyashi, patent is concerned with an electronic control unit (ECU) for controlling an engine for writing data into a rewritable non-volatile memory. The ECU communicates with a rewrite unit, which is an external unit that provides a rewriting control program to rewrite storage content of a flash EEPROM. However, the Hyashi patent is not concerned with determining that communication between the rewriting unit and the ECU is off-line when no response is received from the ECU within a first determination time. However, the Hayashi patent does not disclose that the rewriting unit is configured to determine that communication between the rewriting unit and the ECU is offline when the response is received from the ECU within a first determination time.

#### Summary of the Bapat Patent

The Bapat patent is concerned with a request/reply protocol for a client/server model. Bapat discloses that an acknowledge provided by the server must be received by the client within a first elapsed time period or an error occurs. If the client does not receive the acknowledge before the first time period elapses the client retransmits the request until the client receives the acknowledge from the server. The first time period is set based on a function of the network characteristics, that is, some estimate as to how long the acknowledge should take to be sent to the client by the server. The server, after acknowledging completion of the requested operation, provides the client with a reply containing the results of the requested operation. If the client does not receive the reply within a second elapsed time period, as measured from the receipt of the acknowledge, the client conveys an error to higher layers of the application software executing within the client. The value of the second elapsed time period is a function of a time estimate as to how long the server should take to perform the requested operation. Nevertheless, the Bapat patent fails to teach or suggest that the second elapsed time period is greater than the first elapsed time period.

#### Summary of the Frazier Patent

The Frazier patent is concerned with a method and apparatus for using fibre channel extended link service commands in a point-to-point configuration. The Frazier patent is cited for disclosing a second determination time is greater than the first determination time, as recited in the pending claims. The Examiner cites column 48, lines 26-62 of the Frazier patent as disclosing this feature. A careful reading of the cited passage details a procedure undertaken to recover after a transient link failure. That is, the Frazier patent discloses that to retain logical paths after a transient link failure a specified recovery procedure must be performed within a pre-specified time period. The specific recovery procedure requires within a pre-specified time limit a communication point which detected the failure to verify that it is still connected to the same communication point of the fabric and a verification that the logical paths which were present before the failure must still exist after the failure.

To accomplish this two step process, a control unit which detected the link failure performs a test initialization function with all channels with which it has logical paths established on the link that failed. The test initialization function sends a special request and awaits a reply. If no reply is received in a pre-specified time interval, than a second request is sent. If, after multiple retries, either no response is received within a longer time interval after the first detection of the link failure, or if a response is received indicating that the logical paths which were previously established are no longer established, than a control unit removes all logical paths to the channel to which the test initialization request was sent and frees all resources associated with the logical paths. Nevertheless, the protocol taught by Frazier is the protocol the Bapat patent identifies as problematic and therefore teaches a new protocol to overcome the burdensome nature of the protocol taught by Frazier.

A. Rejection of Claims 1-6 and 24 under 35 U.S.C. §103:

The Office Action rejects Claims 1-6 and 24 as being unpatentable over Hyashi in view of Bapat and Frazier. Applicants respectfully traverse this rejection on the basis of the following arguments that Hyashi in view of Bapat and Frazier fails to teach or suggest all elements of the now pending claims, as described below, and hence does not obviate the claimed invention.

The inventions recited in Claims 1-6 and 24 distinguish patentability over the Hyashi patent in view of the Bapat patent and the Frazier patent. For the Hyashi patent and the Bapat patent and the Frazier patent, either alone or in any combination, fail to teach or suggest each and every feature recited in Claims 1-6 and 24. Specifically, the Hyashi patent fails to teach or suggest a rewriting device is configured to determine communication between the rewriting unit and the ECU is off-line when no response is received from the ECU within a first determination time. Furthermore, the Hyashi patent fails to teach or suggest that the rewriting device is configured to prohibit the determination of offline until a second determination time elapses. The second determination time being greater than the first determination time. Moreover, the Bapat patent fails to cure the factual deficiency of Hyashi for Bapat fails to teach or suggest that

the second elapsed time period, or second determination time is *greater* than the first elapsed time period. The Frazier patent is cited to bridge these factual deficiencies, however, the proposed modification of the Bapat patent with the Frazier patent changes the principle operation of the Bapat protocol and as such, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

In contrast to the cited references, Claims 1-6 and 24 recite rewriting devices for rewriting data stored in a memory of a vehicle controller for prohibiting a determination that the vehicle controller is offline until a second determination time period elapses that is *greater* than a first determination time period. Nowhere does the Hyashi patent, the Bapat patent or the Frazier patent, alone or in any combination, teach or suggest such a feature. Specifically both Hyashi and Bapat fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. Frazier fails to bridge the factual deficiency because Bapat teaches away from the teachings of Frazier for Bapat identifies the protocol taught by Frazier as problematic and as such, teaches a new response/reply protocol to overcome the shortcomings of the response/reply protocol taught by Frazier. The proposed modification of the teachings of Bapat with the teachings of Frazier changes the principle operation of the response/reply protocol of Bapat. Hence, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

More specifically, the Examiner admits that the Hyashi patent and the Bapat patent fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. The bridge the factual deficiencies of the Hyashi patent and the Bapat patent the Examiner cites the Frazier patent for teaching or suggesting a second determination time elapses that is *greater* than a first determination time period. Nevertheless, the cited

combination of Hyashi in view of Bapat and Frazier patents is improper and fails to establish a *prima facie* case of obviousness to reject the claims recited in this application.

The Bapat patent teaches a response/reply protocol that in the event a server does not respond to a client request in a first time period and the client sends a subsequent request, in turn, the server sends an acknowledge after receipt of the second request. In the Frazier patent, a response/reply protocol is taught that operates as follows. If a client does not receive a response from the remote device in a pre-specified time interval, then the client sends multiple requests until a link connecting the client device and the remote device is deemed failed. That is, the Bapat patent discloses a response/reply protocol that requires an acknowledge after a second request whereas the Frazier patent teaches a response/reply protocol that requires no acknowledge after any request. Moreover, the response/reply protocol disclosed by the Bapat patent is meant to overcome the problems encountered with the response/reply protocol of the Frazier patent. As shown in Figure 2B of the Bapat patent the prior art response/reply protocol would send multiple requests until receiving a reply or timing out. The ladder diagram of Figure 2B in the Bapat patent depicts the response/reply protocol cited by the Examiner of the Frazier patent.

As such, any teaching or suggestion to combine the desired references while consequently allowing a reasonable expectation of success is not found in any of the cited references. The Bapat patent fails to teach or suggest that a second determination period is greater than a first determination period or referenced time period as recited in Claims 1-6 and 24. Instead, in Bapat the second elapsed time period referred to can in fact be less than the first time period. Furthermore, the teachings and suggestions of the Bapat patent are meant to overcome the shortcomings of the multiple request approach disclosed by the Frazier patent and, hence, the Bapat patent teaches away from the Frazier patent thus providing no motivation or suggestion to one skilled in the art to combine the teachings of Bapat and the teachings of Frazier.

Moreover, the Examiner states it would have been obvious to one of ordinary skill in the art to use the combined teachings of the Bapat patent and the Frazier patent in the

system taught by the Hayashi patent for the desirable purpose of efficiency and reliability. Nonetheless, the Bapat patent characterizes the technology disclosed therein as an efficient request/reply protocol for a client/server communication and data processing model. *See*, Abstract of Bapat. Hence, if the Bapat patent discloses an efficient and reliable request/reply protocol, one of ordinary skill in the art is not motivated to turn to the Frazier patent to modify the request/reply protocol of Bapat patent since the Bapat patent expressly teaches a newer more efficient request/reply protocol to avoid and overcome the problems associated with the request/reply protocol disclosed by the Frazier patent. As such, there is no teaching, suggestion, or motivation found in the references or in the knowledge generally available to one of ordinary skill in the art to combine the references as the Examiner suggests.

Accordingly, Applicants contend that the cited combination of the Hyashi patent in view the Bapat patent and the Frazier patent fail to establish a *prima facie* case of obviousness and, therefore, fail to obviate Claims 1-6 and 24. Hence, Applicants request the Examiner to reconsider and withdraw the rejection of Claims 1-6 and 24 under 35 U.S.C. §103.

B. Rejection of Claims 7-12 and 25 under 35 U.S.C. §103:

The Office Action rejects Claims 7-12 and 25 as being unpatentable over Hyashi in view of Bapat and Frazier. Applicants respectfully traverse this rejection on the basis of the following arguments that Hyashi in view of Bapat and Frazier fails to teach or suggest all elements of the now pending claims, as described below, and hence does not obviate the claimed invention.

The inventions recited in Claims 7-12 and 25 distinguish patentability over the Hyashi patent in view of the Bapat patent and the Frazier patent. For the Hyashi patent, the Bapat patent and the Frazier patent, either alone or in any combination, fail to teach or suggest each and every feature recited in Claims 7-12 and 25. Specifically, the Hyashi patent fails to teach or suggest a rewriting unit is configured to determine communication between the rewriting unit and the ECU is off-line when no response is received from the

ECU within a first determination time. Furthermore, the Hyashi patent fails to teach or suggest that the rewriting device of the present invention is configured to prohibit the determination of offline until a second determination time elapses. The second determination time being greater than the first determination time. Moreover, the Bapat patent fails to cure the factual deficiency of Hyashi for Bapat fails to teach or suggest that the second elapsed time period is *greater* than the first elapsed time period. The Frazier patent is cited to bridge these factual deficiencies, however, the proposed modification of the Bapat patent with the Frazier patent changes the principle operation of the Bapat protocol and as such, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

In contrast to the cited references, Claims 7-12 and 25 recite rewriting devices for rewriting data stored in a memory of a vehicle controller for prohibiting a determination that the vehicle controller is offline until a second determination time period elapses that is *greater* than a first determination time period. Nowhere does the Hyashi patent, the Bapat patent or the Frazier patent, alone or in any combination, teach or suggest such a feature. Specifically both Hyashi and Bapat fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. Frazier fails to bridge the factual deficiency because Bapat teaches away from the teachings of Frazier for Bapat identifies the protocol taught by Frazier as problematic and as such, teaches a new response/reply protocol to overcome the shortcomings of the response/reply protocol taught by Frazier. The proposed modification of the teachings of Bapat with the teachings of Frazier changes the principle operation of the response/reply protocol of Bapat. Hence, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

More specifically, the Examiner admits that the Hyashi patent and the Bapat patent fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until



a second determination time elapses that is *greater* than a first determination time period. The bridge the factual deficiencies of the Hyashi patent and the Bapat patent the Examiner cites the Frazier patent for teaching or suggesting a second determination time elapses that is *greater* than a first determination time period. Nevertheless, the cited combination of Hyashi in view of Bapat and Frazier patents is improper and fails to establish a *prima facie* case of obviousness to reject the claims recited in this application.

The Bapat patent teaches a response/reply protocol that in the event a server does not respond to a client request in a first time period and the client sends a subsequent request, in turn, the server sends an acknowledge after receipt of the second request. In the Frazier patent, a response/reply protocol is taught that operates as follows. If a client does not receive a response from the remote device in a pre-specified time interval, then the client sends multiple requests until a link connecting the client device and the remote device is deemed failed. That is, the Bapat patent discloses a response/reply protocol that requires an acknowledge after a second request whereas the Frazier patent teaches a response/reply protocol that requires no acknowledge after any request. Moreover, the response/reply protocol disclosed by the Bapat patent is meant to overcome the problems encountered with the response/reply protocol of the Frazier patent. As shown in Figure 2B of the Bapat patent the prior art response/reply protocol would send multiple requests until receiving a reply or timing out. The ladder diagram of Figure 2B in the Bapat patent depicts the response/reply protocol cited by the Examiner of the Frazier patent.

As such, any teaching or suggestion to combine the desired references while consequently allowing a reasonable expectation of success is not found in any of the cited references. The Bapat patent fails to teach or suggest that a second determination period is greater than a first determination period or referenced time period as recited in Claims 7-12 and 25. Instead, in Bapat the second elapsed time period referred to can in fact be less than the first time period. Furthermore, the teachings and suggestions of the Bapat patent are meant to overcome the shortcomings of the multiple request approach disclosed by the Frazier patent and, hence, the Bapat patent teaches away from the

Frazier patent thus providing no motivation or suggestion to one skilled in the art to combine the teachings of Bapat and the teachings of Frazier.

Moreover, the Examiner states it would have been obvious to one of ordinary skill in the art to use the combined teachings of the Bapat patent and the Frazier patent in the system taught by the Hayashi patent for the desirable purpose of efficiency and reliability. Nonetheless, the Bapat patent characterizes the technology disclosed therein as an efficient request/reply protocol for a client/server communication and data processing model. *See*, Abstract of Bapat. Hence, if the Bapat patent discloses an efficient and reliable request/reply protocol, one of ordinary skill in the art is not motivated to turn to the Frazier patent to modify the request/reply protocol of Bapat patent since the Bapat patent expressly teaches a newer more efficient request/reply protocol to avoid and overcome the problems associated with the request/reply protocol disclosed by the Frazier patent. As such, there is no teaching, suggestion, or motivation found in the references or in the knowledge generally available to one of ordinary skill in the art to combine the references as the Examiner suggests.

Accordingly, Applicants contend that the cited combination of the Hyashi patent in view the Bapat patent and the Frazier patent fail to establish a *prima facie* case of obviousness and, therefore, fail to obviate Claims 7-12 and 25. Hence, Applicants request the Examiner to reconsider and withdraw the rejection of Claims 7-12 and 25 under 35 U.S.C. §103.

C. Rejection of Claims 13-19 and 26 under 35 U.S.C. §103:

The Office Action rejects Claims 13-19 and 26 as being unpatentable over Hyashi in view of Bapat and Frazier. Applicants respectfully traverse this rejection on the basis of the following arguments that Hyashi in view of Bapat and Frazier fails to teach or suggest all elements of the now pending claims, as described below, and hence does not obviate the claimed invention.

The inventions recited in Claims 13-19 and 26 distinguish patentability over the Hyashi patent in view of the Bapat patent and the Frazier patent. For the Hyashi patent and the Bapat patent and the Frazier patent, either alone or in any combination, fail to teach or suggest each and every feature recited in Claims 13-19 and 26. Specifically, the Hyashi patent fails to teach or suggest a rewriting device is configured to determine communication between the rewriting unit and the ECU is off-line when no response is received from the ECU within a first determination time. Furthermore, the Hyashi patent fails to teach or suggest that the rewriting device of the present invention is configured to prohibit the determination of offline until a second determination time elapses. The second determination time being greater than the first determination time. Moreover, the Bapat patent fails to cure the factual deficiency of Hyashi for Bapat fails to teach or suggest that the second elapsed time period is *greater* than the first elapsed time period. Likewise, Frazier fails to bridge the factual deficiency of Bapat and Hyashi because Bapat teaches away from the teachings of Frazier. Bapat identifies the response/reply protocol taught by Frazier as problematic and teaches away from the use of the response/reply protocol taught by Frazier. Moreover, the proposed modification of the Bapat with the Frazier changes the principle operation of the Bapat response/reply protocol. Hence, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

In contrast to the cited references, Claims 13-19 and 26 recite rewriting devices for rewriting data stored in a memory of a vehicle controller for prohibiting a determination that the vehicle controller is offline until a second determination time period elapses that is *greater* than a first determination time period. Nowhere does the Hyashi patent, the Bapat patent or the Frazier patent, alone or in any combination, teach or suggest such a feature. Specifically both Hyashi and Bapat fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. Frazier fails to bridge the factual deficiency because Bapat teaches away from the teachings of Frazier for Bapat identifies the protocol taught by Frazier as problematic and as such, teaches a new

response/reply protocol to overcome the shortcomings of the response/reply protocol taught by Frazier. The proposed modification of the teachings of Bapat with the teachings of Frazier changes the principle operation of the response/reply protocol of Bapat. Hence, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

More specifically, the Examiner admits that the Hyashi patent and the Bapat patent fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. The bridge the factual deficiencies of the Hyashi patent and the Bapat patent the Examiner cites the Frazier patent for teaching or suggesting a second determination time elapses that is *greater* than a first determination time period. Nevertheless, the cited combination of Hyashi in view of Bapat and Frazier patents is improper and fails to establish a *prima facie* case of obviousness to reject the claims recited in this application.

The Bapat patent teaches a response/reply protocol that in the event a server does not respond to a client request in a first time period and the client sends a subsequent request, in turn, the server sends an acknowledge after receipt of the second request. In the Frazier patent, a response/reply protocol is taught that operates as follows. If a client does not receive a response from the remote device in a pre-specified time interval, then the client sends multiple requests until a link connecting the client device and the remote device is deemed failed. That is, the Bapat patent discloses a response/reply protocol that requires an acknowledge after a second request whereas the Frazier patent teaches a response/reply protocol that requires no acknowledge after any request. Moreover, the response/reply protocol disclosed by the Bapat patent is meant to overcome the problems encountered with the response/reply protocol of the Frazier patent. As shown in Figure 2B of the Bapat patent the prior art response/reply protocol would send multiple requests until receiving a reply or timing out. The ladder diagram of Figure 2B in the Bapat patent depicts the response/reply protocol cited by the Examiner of the Frazier patent.

As such, any teaching or suggestion to combine the desired references while consequently allowing a reasonable expectation of success is not found in any of the cited references. The Bapat patent fails to teach or suggest that a second determination period is greater than a first determination period or referenced time period as recited in Claims 13-19 and 26. Instead, in Bapat the second elapsed time period referred to can in fact be less than the first time period. Furthermore, the teachings and suggestions of the Bapat patent are meant to overcome the shortcomings of the multiple request approach disclosed by the Frazier patent and, hence, the Bapat patent teaches away from the Frazier patent thus providing no motivation or suggestion to one skilled in the art to combine the teachings of Bapat and the teachings of Frazier.

Moreover, the Examiner states it would have been obvious to one of ordinary skill in the art to use the combined teachings of the Bapat patent and the Frazier patent in the system taught by the Hayashi patent for the desirable purpose of efficiency and reliability. Nonetheless, the Bapat patent characterizes the technology disclosed therein as an efficient request/reply protocol for a client/server communication and data processing model. *See*, Abstract of Bapat. Hence, if the Bapat patent discloses an efficient and reliable request/reply protocol, one of ordinary skill in the art is not motivated to turn to the Frazier patent to modify the request/reply protocol of Bapat patent since the Bapat patent expressly teaches a newer more efficient request/reply protocol to avoid and overcome the problems associated with the request/reply protocol disclosed by the Frazier patent. As such, there is no teaching, suggestion, or motivation found in the references or in the knowledge generally available to one of ordinary skill in the art to combine the references as the Examiner suggests.

Accordingly, Applicants contend that the cited combination of the Hyashi patent in view the Bapat patent fail to establish a *prima facie* case of obviousness and, therefore, fail to obviate Claims 13-19 and 26. Hence, Applicants request the Examiner to reconsider and withdraw the rejection of Claims 13-19 and 26 under 35 U.S.C. §103.

D. Rejection of Claims 20-23 under 35 U.S.C. §103:

The Office Action rejects Claims 20-23 as being unpatentable over Hyashi in view of Bapat and Frazier. Applicants respectfully traverse this rejection on the basis of the following arguments that Hyashi in view of Bapat and Frazier fails to teach or suggest all elements of the now pending claims, as described below, and hence does not obviate the claimed invention.

The inventions recited in Claims 20-23 distinguish patentability over the Hyashi patent in view of the Bapat patent and the Frazier patent. For the Hyashi patent and the Bapat patent and the Frazier patent, either alone or in any combination, fail to teach or suggest each and every feature recited in Claims 20-23. Specifically, the Hyashi patent fails to teach or suggest a method for rewriting data stored in a memory of a vehicle controller that determines if communication between the rewriting unit and the ECU is off-line when no response is received from the ECU within a determination time. Furthermore, the Hyashi patent fails to teach or suggest that the determination time is greater than a reference time for the determination of offline when a deleting operation is not being performed in the vehicle controller. Moreover, the Bapat patent fails to cure the factual deficiency of Hyashi for Bapat fails to teach or suggest that the determination time is *greater* than a reference time for the determination of offline when a deleting operation is not being performed in the vehicle controller. Frazier fails to bridge the factual deficiency of Hyashi and Bapat because Bapat teaches away from the teachings of Frazier. That is, Bapat identifies the response/reply protocol taught by Frazier as problematic and as such, teaches a new more efficient response/reply protocol. Moreover, the proposed modification of the Bapat patent with the Frazier patent changes the principle operation of the response/reply protocol taught by Bapat. Hence, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

In contrast to the cited references, Claims 20-23 recite method for rewriting data stored in a memory of a vehicle controller that includes a step of determining that communication with the vehicle controller is offline if there is no response from the

vehicle controller with a determination time. The determination time is greater than a reference time for the determination of offline when deleting operation is not performed in the vehicle controller. Nowhere does the Hyashi patent, the Bapat patent or the Frazier patent, alone or in any combination, teach or suggest such a step. Specifically both Hyashi and Bapat fail to teach or suggest a method for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a determination time elapses that is *greater* than a reference time period. Frazier fails to bridge the factual deficiency because Bapat teaches away from the teachings of Frazier for Bapat identifies the protocol taught by Frazier as problematic and as such, teaches a new response/reply protocol to overcome the shortcomings of the response/reply protocol taught by Frazier. The proposed modification of the teachings of Bapat with the teachings of Frazier changes the principle operation of the response/reply protocol of Bapat. Hence, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

More specifically, the Examiner admits that the Hyashi patent and the Bapat patent fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. The bridge the factual deficiencies of the Hyashi patent and the Bapat patent the Examiner cites the Frazier patent for teaching or suggesting a second determination time elapses that is *greater* than a first determination time period. Nevertheless, the cited combination of Hyashi in view of Bapat and Frazier patents is improper and fails to establish a *prima facie* case of obviousness to reject the claims recited in this application.

The Bapat patent teaches a response/reply protocol that in the event a server does not respond to a client request in a first time period and the client sends a subsequent request, in turn, the server sends an acknowledge after receipt of the second request. In the Frazier patent, a response/reply protocol is taught that operates as follows. If a client does not receive a response from the remote device in a pre-specified time interval, then the client sends multiple requests until a link connecting the client device and the remote

device is deemed failed. That is, the Bapat patent discloses a response/reply protocol that requires an acknowledge after a second request whereas the Frazier patent teaches a response/reply protocol that requires no acknowledge after any request. Moreover, the response/reply protocol disclosed by the Bapat patent is meant to overcome the problems encountered with the response/reply protocol of the Frazier patent. As shown in Figure 2B of the Bapat patent the prior art response/reply protocol would send multiple requests until receiving a reply or timing out. The ladder diagram of Figure 2B in the Bapat patent depicts the response/reply protocol cited by the Examiner of the Frazier patent.

As such, any teaching or suggestion to combine the desired references while consequently allowing a reasonable expectation of success is not found in any of the cited references. The Bapat patent fails to teach or suggest that a determination period is greater than a reference time period as recited in Claims 20-23. Instead, in Bapat the second elapsed time period referred to can in fact be less than the first time period. Furthermore, the teachings and suggestions of the Bapat patent are meant to overcome the shortcomings of the multiple request approach disclosed by the Frazier patent and, hence, the Bapat patent teaches away from the Frazier patent thus providing no motivation or suggestion to one skilled in the art to combine the teachings of Bapat and the teachings of Frazier.

Moreover, the Examiner states it would have been obvious to one of ordinary skill in the art to use the combined teachings of the Bapat patent and the Frazier patent in the system taught by the Hayashi patent for the desirable purpose of efficiency and reliability. Nonetheless, the Bapat patent characterizes the technology disclosed therein as an efficient request/reply protocol for a client/server communication and data processing model. *See*, Abstract of Bapat. Hence, if the Bapat patent discloses an efficient and reliable request/reply protocol, one of ordinary skill in the art is not motivated to turn to the Frazier patent to modify the request/reply protocol of Bapat patent since the Bapat patent expressly teaches a newer more efficient request/reply protocol to avoid and overcome the problems associated with the request/reply protocol disclosed by the Frazier patent. As such, there is no teaching, suggestion, or motivation



found in the references or in the knowledge generally available to one of ordinary skill in the art to combine the references as the Examiner suggests.

Accordingly, Applicants contend that the cited combination of the Hyashi patent in view the Bapat patent fail to establish a *prima facie* case of obviousness and, therefore, fail to obviate Claims 20-23. Hence, Applicants request the Examiner to reconsider and withdraw the rejection of Claims 20-23 under 35 U.S.C. §103.

E. Rejection of Claim 27:

The Office Action does not specifically reject Claim 27 as being unpatentable over Hyashi in view of Bapat and Frazier. Nonetheless, Applicants respectfully submit the following arguments that Hyashi in view of Bapat and Frazier, even if cited, either alone or in any combination, would fail to teach or suggest all elements of the now pending claim, as described below, and hence does not obviate the claimed invention.

Amended Claim 27 recites a rewriting device for rewriting data stored in a non-volatile memory of a vehicle controller. The rewriting device is capable of communicating with the vehicle controller. Further, the rewriting device configured to determine that communication between the rewriting device and the vehicle controller is offline when no response is received from the vehicle controller within a first determination time from the time at which the rewriting device transmits to the vehicle controller a request for a deleting operation of the data. When the deleting operation of the data is being performed, the rewriting device is configured to prohibit the determination of offline until a second determination time elapses from the time at which the rewriting device transmits to the vehicle controller a request for a result of the deleting operation, the second determination time being greater than the first determination time.

The invention as defined in amended Claim 27 is characterized in the rewriting device is configured to determine that communication between the rewriting device and the vehicle controller is offline when no response is received from the vehicle controller within a first determination time from the time at which the rewriting device transmits to

the vehicle controller a request for a deleting operation of the data. When the deleting operation of the data is being performed, the rewriting device is configured to prohibit the determination of offline until a second determination time elapses from the time at which the rewriting device transmits to the vehicle controller a request for a result of the deleting operation.

According to the invention, the first determination time is measured when a request for a deleting operation of the data is transmitted while the second determination time is measured when a request for a result of the deleting operation of the data is transmitted. Thus, the first determination time and the second determination time are switched in accordance with whether a request for a deleting operation or a request for a result of the deleting operation is transmitted.

According to Bapat's patent, TIMEOUTrequest, which is determined by the examiner to correspond to the first determination time of the invention, is measured from a request from the client. TIMEOUTreply, which is determined by the examiner to correspond to the second determination time of the invention, is measured from a receipt of Acknowledge from the server. Switching between TIMEOUTrequest and TIMEOUTreply is made in accordance with whether the client receives Acknowledge from the server. Bapat's patent fails to disclose a scheme of switching between the first and second determination times in accordance with whether a request for a deleting operation or a request for a result of the deleting operation is transmitted.

According to Frazier's patent, RA\_TOV is measured from a TIN request. After multiple retries of the TIN function, LP\_TOV is measured. Switching between RA\_TOV and LP\_TOV is made in accordance with the number of retries of the TIN function. Frazier's patent fails to disclose a scheme of switching between the first and second determination times in accordance with whether a request for a deleting operation or a request for a result of the deleting operation or a request for a result of the deleting operation is transmitted.

Nowhere does Hyashi, Bapat, or Frazier, either alone or in any combination, disclose, teach, or suggest such a rewriting device. Accordingly, Claim 27 is patentably distinct from each of the cited reference either alone or in any combination.

F. Rejection of Claim 28:

The Office Action does not specifically reject Claim 28 as being unpatentable over Hyashi in view of Bapat and Frazier. Nevertheless, Applicants respectfully submit the following arguments that, Hyashi in view of Bapat and Frazier, even if cited, either alone or in any combination, would fail to teach or suggest all elements of the now pending claim, as described below, and hence does not obviate the claimed invention.

Amended Claim 28 recites a rewriting device for rewriting data stored in a non-volatile memory of a vehicle controller. The rewriting device is capable of communicating with the vehicle controller. Further, the rewriting device configured to determine that communication between the rewriting device and the vehicle controller is offline when no response is received from the vehicle controller within a first determination time from the time at which the rewriting device transmits to the vehicle controller a request for a writing operation of new data. When the writing operation of the new data is being performed, the rewriting device is configured to prohibit the determination of offline until a second determination time elapses from the time at which the rewriting device transmits to the vehicle controller a request for a result of the writing operation, the second determination time being greater than the first determination time.

The invention as defined in amended Claim 28 is characterized in the rewriting device is configured to determine that communication between the rewriting device and the vehicle controller is offline when no response is received from the vehicle controller within a first determination time from the time at which the rewriting device transmits to the vehicle controller a request for a writing operation of new data. When the writing operation of the data is being performed, the rewriting device is configured to prohibit the determination of offline until a second determination time elapses from the time at which

the rewriting device transmits to the vehicle controller a request for a result of the writing operation.

According to the invention, the first determination time is measured when a request for a writing operation of the new data is transmitted while the second determination time is measured when a request for a result of the writing operation of the data is transmitted. Thus, the first determination time and the second determination time are switched in accordance with whether a request for a writing operation or a request for a result of the writing operation is transmitted.

According to Bapat's patent, TIMEOUTrequest, which is determined by the examiner to correspond to the first determination time of the invention, is measured from a request from the client. TIMEOUTreply, which is determined by the examiner to correspond to the second determination time of the invention, is measured from a receipt of Acknowledge from the server. Switching between TIMEOUTrequest and TIMEOUTreply is made in accordance with whether the client receives Acknowledge from the server. Bapat's patent fails to disclose a scheme of switching between the first and second determination times in accordance with whether a request for a writing operation or a request for a result of the writing operation is transmitted.

According to Frazier's patent, RA\_TOV is measured from a TIN request. After multiple retries of the TIN function, LP\_TOV is measured. Switching between RA\_TOV and LP\_TOV is made in accordance with the number of retries of the TIN function. Frazier's patent fails to disclose a scheme of switching between the first and second determination times in accordance with whether a request for a writing operation or a request for a result of the writing operation or a request for a result of the writing operation is transmitted.

Nowhere does Hyashi, Bapat, or Frazier, either alone or in any combination, disclose, teach, or suggest such a rewriting device. Accordingly, Claim 28 is patentably distinct from each of the cited reference either alone or in any combination.

G. Rejection of Claim 29:

The Office Action does not specifically reject Claim 29 as being unpatentable over Hyashi in view of Bapat and Frazier. Nevertheless, Applicants respectfully submit the following arguments that, Hyashi in view of Bapat and Frazier, even if cited, either alone or in any combination, would fail to teach or suggest all elements of the now pending claim, as described below, and hence does not obviate the claimed invention.

Claim 29 recites a rewriting device for rewriting data stored in a memory of a vehicle controller. The rewriting device includes a means for communicating with the vehicle controller and is configured to determine that communication between the rewriting device and the vehicle controller is offline when no response is received from the vehicle controller within a first determination time. As such, when a deleting operation of the data is being performed, the rewriting device is configured to prohibit the determination of offline until a second determination time elapses, the second determination time being greater than the first determination time.

The invention recited in Claim 29 distinguishes patentability over the Hyashi patent in view of the Bapat patent and the Frazier patent. For the Hyashi patent and the Bapat patent and the Frazier patent, either alone or in any combination, fail to teach or suggest each and every feature recited in Claim 29. Specifically, the Hyashi patent fails to teach or suggest a means for communication with a vehicle controller is configured to determine communication between the rewriting unit and the vehicle controller is off-line when no response is received from the vehicle controller within a first determination time. Furthermore, the Hyashi patent fails to teach or suggest that when a deleting operation of the data is being performed, the means for communicating is configured to prohibit the determination of offline until a second determination time elapses. The second determination time being greater than the first determination time. Moreover, the Bapat patent fails to cure the factual deficiency of Hyashi for Bapat fails to teach or suggest that the second elapsed time period, or second determination time is *greater* than the first elapsed time period. The Frazier patent also fails to bridge these factual deficiencies, for modification of the Bapat patent to include the teachings of the Frazier

patent changes the principle operation of the response/reply protocol taught by Bapat. As such, the teachings of the cited references would not be sufficient to render the pending claim *prima facie* obvious.

In contrast, Claim 29 recites rewriting devices for rewriting data stored in a memory of a vehicle controller for prohibiting a determination that the vehicle controller is offline until a second determination time period elapses that is *greater* than a first determination time period. Nowhere does the Hyashi patent, the Bapat patent or the Frazier patent, alone or in any combination, teaches or suggests such a feature. Specifically both Hyashi and Bapat fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. Frazier fails to bridge the factual deficiency because Bapat teaches away from the teachings of Frazier for Bapat identifies the protocol taught by Frazier as problematic and as such, the proposed modification of the Bapat with the Frazier changes the principle operation of the Bapat protocol. Hence, the teachings of the references are not sufficient to render the pending claims *prima facie* obvious.

More specifically, the Examiner admits that the Hyashi patent and the Bapat patent fail to teach or suggest a rewriting device for rewriting data stored in a memory of a vehicle controller that prohibits determination that the vehicle controller is offline until a second determination time elapses that is *greater* than a first determination time period. The bridge the factual deficiencies of the Hyashi patent and the Bapat patent the Examiner cites the Frazier patent for teaching or suggesting a second determination time elapses that is *greater* than a first determination time period. Nevertheless, the cited combination of Hyashi in view of Bapat and Frazier patents is improper and fails to establish a *prima facie* case of obviousness to reject the claims recited in this application.

The Bapat patent teaches a response/reply protocol that in the event a server does not respond to a client request in a first time period and the client sends a subsequent

request, in turn, the server sends an acknowledge after receipt of the second request. In the Frazier patent, a response/reply protocol is taught that operates as follows. If a client does not receive a response from the remote device in a pre-specified time interval, then the client sends multiple requests until a link connecting the client device and the remote device is deemed failed. That is, the Bapat patent discloses a response/reply protocol that requires an acknowledge after a second request whereas the Frazier patent teaches a response/reply protocol that requires no acknowledge after any request. Moreover, the response/reply protocol disclosed by the Bapat patent is meant to overcome the problems encountered with the response/reply protocol of the Frazier patent. As shown in Figure 2B of the Bapat patent the prior art response/reply protocol would send multiple requests until receiving a reply or timing out. The ladder diagram of Figure 2B in the Bapat patent depicts the response/reply protocol cited by the Examiner of the Frazier patent.

As such, any teaching or suggestion to combine the desired references while consequently allowing a reasonable expectation of success is not found in any of the cited references. The Bapat patent fails to teach or suggest that a second determination period is greater than a first determination period or referenced time period as recited in Claim 29. Instead, in Bapat the second elapsed time period referred to can in fact be less than the first time period. Furthermore, the teachings and suggestions of the Bapat patent are meant to overcome the shortcomings of the multiple request approach disclosed by the Frazier patent and, hence, the Bapat patent teaches away from the Frazier patent thus providing no motivation or suggestion to one skilled in the art to combine the teachings of Bapat and the teachings of Frazier.

Moreover, the Examiner states it would have been obvious to one of ordinary skill in the art to use the combined teachings of the Bapat patent and the Frazier patent in the system taught by the Hayashi patent for the desirable purpose of efficiency and reliability. Nonetheless, the Bapat patent characterizes the technology disclosed therein as an efficient request/reply protocol for a client/server communication and data processing model. *See*, Abstract of Bapat. Hence, if the Bapat patent discloses an efficient and reliable request/reply protocol, one of ordinary skill in the art is not

motivated to turn to the Frazier patent to modify the request/reply protocol of Bapat patent since the Bapat patent expressly teaches a newer more efficient request/reply protocol to avoid and overcome the problems associated with the request/reply protocol disclosed by the Frazier patent. As such, there is no teaching, suggestion, or motivation found in the references or in the knowledge generally available to one of ordinary skill in the art to combine the references as the Examiner suggests.

Accordingly, Applicants contend that even if the cited combination of the Hyashi patent in view the Bapat patent and the Frazier patent are to be applied to Claim 29, the combination would fail to establish a *prima facie* case of obviousness and, therefore, fail to obviate Claim 29.

### **CONCLUSION**

For the foregoing reasons, Applicants contend that Claims 1-29 define over the cited art. If there are any remaining issues, an opportunity for an interview is requested prior to the issuance of another Office Action.

Respectfully submitted,

LAHIVE & COCKFIELD, LLP



David R. Burns  
Registration No. 46,590  
Attorney for Applicants

28 State Street  
Boston, MA 02109  
(617) 227-7400  
(617) 742-4214

Date: **June 28, 2004**